

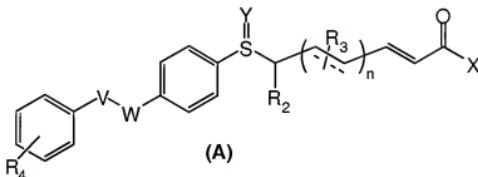
In the Claims:

This listing of claims will replace all prior versions, and listings of the claims in the application.

Please amend claims 55-57; and cancel claims 58-63 and 68-69, as follows:

1-40. (canceled).

41. (previously presented) A compound of general formula (A)



in which:

R^2 and R^3 are independently hydrogen, (C_1 - C_{12}) alkyl, substituted (C_1 - C_{12}) alkyl, or unsaturated (C_2 - C_{12}) comprising one or more $C=C$ bond or $C\equiv C$ bond, (C_6 or C_{10}) aryl or (C_6 or C_{10}) heteroaryl, or a combination thereof to form a linked or fused ring system, or (C_1 - C_{10}) alkoxy, (C_1 - C_{10}) thioalkoxy, hydroxyl, (C_1 - C_{10}) hydroxylalkyl, halo, (C_1 - C_{10}) haloalkyl, cyano, nitro, amino, amido, (C_1 - C_{10}) alkylamino, (C_1 - C_{10}) alkylcarbonyloxy, (C_1 - C_{10}) alkoxy carbonyl, (C_1 - C_{10}) alkylcarbonyl, (C_1 - C_{10}) alkylthiocarbonyl, (C_1 - C_{10}) alkylsulfonylamino, aminosulfonyl, (C_1 - C_{10}) alkylsulfinyl, or (C_1 - C_{10}) alkylsulfonyl, in which the saturated or an unsaturated hydrocarbon chain is optionally interrupted by O, S, NR, CO, C(NR), N(R)SO₂, SO₂N(R), N(R)C(O)O, OC(O)N(R), N(R)C(O)N(R), OC(O), C(O)O, OSO₂, SO₂O, or OC(O)O, where R is independently hydrogen, (C_1 - C_{10}) alkyl, (C_1 - C_{10}) alkenyl, (C_1 - C_{10}) alkynyl, (C_1 - C_{10}) alkoxy, (C_1 - C_{10}) hydroxylalkyl, hydroxyl, (C_1 - C_{10}) halolalkyl, where each of the saturated or unsaturated hydrocarbon chains are optionally substituted with (C_1 - C_{10}) alkyl, (C_1 - C_{10}) alkenyl, (C_1 - C_{10}) alkynyl, (C_1 - C_{10}) alkoxy, hydroxyl, hydroxyl, (C_1 - C_{10}) hydroxylalkyl, halo, (C_1 - C_{10}) haloalkyl, amino, (C_1 - C_{10}) alkylcarbonyloxy, (C_1 - C_{10}) alkoxy carbonyl, (C_1 - C_{10}) alkylcarbonyl, (C_1 - C_{10})

alkylsulfonylamino, aminosulfonyl, or (C₁-C₁₀) alkylsulfonyl, or R² and R³ optionally form a (C₆ or C₁₀) aryl, (C₆ or C₁₀) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C₃-C₈) heterocycloalkenyl, (C₅-C₈) cycloalkene ring, (C₅-C₈) cycloalkyl, (C₅-C₈) heterocycloalkyl linked or fused ring system, optionally containing up to 3 heteroatoms selected from oxygen, nitrogen, sulphur, and phosphorous;

R₄ is hydrogen, unsubstituted or substituted C₁-C₁₀ alkyl, an unsaturated hydrocarbon chain of up to ten carbon atoms comprising one or more carbon-carbon double bonds, C₆ or C₁₀ aryl, a 5 to 10 membered heterocyclic group, C₁-C₁₀ alkoxy, C₁-C₁₀ thioalkoxy, hydroxyl, halo, cyano, nitro, amino, amido, (C₁-C₁₀ alkyl)thiocarbonyl, (C₁-C₁₀ alkyl)sulfonylamino, aminosulfonyl, C₁-C₁₀ alkylsufinyl, C₁-C₁₀ alkylsulfonyl, or a saturated or unsaturated C₃-C₁₂ hydrocarbon chain interrupted by O, S, NR, CO, C(NR), C(R)SO₂, or OC(O)O, wherein R is as defined above and the saturated or unsaturated hydrocarbon chain is optionally substituted as defined above;

n is equal to 0, 1 or 2;

X is hydroxyl (-OH), -OR, NHR, hydroxamate (-NHOH), NHOR, NROR, NRNHR, or SR, where each R is independently hydrogen, C₁-C₆ alkyl or substituted C₁-C₆ alkyl; and

Y is 0, 1 or 2 oxygen atoms, or NR where R is H, OH, C₁-C₆ alkyl or substituted C₁-C₆ alkyl;

in which V and W are as follows:

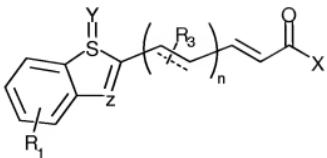
a single carbon-carbon bond;

V is CR and W is N, saturated or unsaturated;

V is N and W is CR, saturated or unsaturated;

a linkage of the form VW or WV = RRC-O or RRC-S, wherein V and W are each optionally substituted (C₁-C₆) alkyl, C₆ aryl or heterocycle; and
in which each R is independently defined.

42. (previously presented) A compound of general formula (B1)



(B1)

in which:

R^1 is $(C_6$ or $C_{10})$ aryl, $(C_6$ or $C_{10})$ arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, $(C_6$ or $C_{10})$ heteroaryl, $(C_3$ - $C_8)$ heterocycloalkenyl, $(C_5$ - $C_8)$ cycloalkene ring, $(C_5$ - $C_8)$ cycloalkyl, $(C_5$ - $C_8)$ heterocycloalkyl or a combination thereof to form a linked or fused ring system, the cyclic moiety being optionally substituted with $(C_1$ - $C_{10})$ alkyl, $(C_1$ - $C_{10})$ alkenyl, $(C_1$ - $C_{10})$ alkynyl, $(C_1$ - $C_{10})$ alkoxy, $(C_1$ - $C_{10})$ thioalkoxy, hydroxyl, $(C_1$ - $C_{10})$ hydroxylalkyl, halo, $(C_1$ - $C_{10})$ haloalkyl, amino, amido, $(C_1$ - $C_{10})$ alkylamino, $(C_1$ - $C_{10})$ alkylcarbonyloxy, $(C_1$ - $C_{10})$ alkoxy carbonyl, $(C_1$ - $C_{10})$ alkylcarbonyl, $(C_1$ - $C_{10})$ alkylthiocarbonyl, $(C_1$ - $C_{10})$ alkylsulfonylamino, aminosulfonyl, $(C_1$ - $C_{10})$ alkylsulfinyl, or $(C_1$ - $C_{10})$ alkylsulfonyl,

R^3 is hydrogen, $(C_1$ - $C_{12})$ alkyl, substituted $(C_1$ - $C_{12})$ alkyl, or unsaturated $(C_2$ - $C_{12})$ comprising one or more $C=C$ bond or $C\equiv C$ bond, $(C_6$ or $C_{10})$ aryl or $(C_6$ or $C_{10})$ heteroaryl, or a combination thereof to form a linked or fused ring system, or $(C_1$ - $C_{10})$ alkoxy, $(C_1$ - $C_{10})$ thioalkoxy, hydroxyl, $(C_1$ - $C_{10})$ hydroxylalkyl, halo, $(C_1$ - $C_{10})$ haloalkyl, cyano, nitro, amino, amido, $(C_1$ - $C_{10})$ alkylamino, $(C_1$ - $C_{10})$ alkylcarbonyloxy, $(C_1$ - $C_{10})$ alkoxy carbonyl, $(C_1$ - $C_{10})$ alkylcarbonyl, $(C_1$ - $C_{10})$ alkylthiocarbonyl, $(C_1$ - $C_{10})$ alkylsulfonylamino, aminosulfonyl, $(C_1$ - $C_{10})$ alkylsulfinyl, or $(C_1$ - $C_{10})$ alkylsulfonyl, in which the saturated or an unsaturated hydrocarbon chain is optionally interrupted by O , S , NR , CO , $C(NR)$, $N(R)SO_2$, $SO_2N(R)$, $N(R)C(O)O$, $OC(O)N(R)$, $N(R)C(O)N(R)$, $OC(O)$, $C(O)O$, OSO_2 , SO_2O , or $OC(O)O$, where R is independently hydrogen, $(C_1$ - $C_{10})$ alkyl, $(C_1$ - $C_{10})$ alkenyl, $(C_1$ - $C_{10})$ alkynyl, $(C_1$ - $C_{10})$ alkoxy, $(C_1$ - $C_{10})$ hydroxylalkyl, hydroxyl, $(C_1$ - $C_{10})$ halolalkyl, where each of the saturated or unsaturated hydrocarbon chains are optionally substituted with $(C_1$ - $C_{10})$ alkyl, $(C_1$ - $C_{10})$ alkenyl, $(C_1$ - $C_{10})$ alkynyl, $(C_1$ - $C_{10})$ alkoxy, hydroxyl, hydroxyl, $(C_1$ - $C_{10})$ hydroxylalkyl, halo, $(C_1$ - $C_{10})$ haloalkyl, amino, $(C_1$ - $C_{10})$ alkylcarbonyloxy, $(C_1$ - $C_{10})$ alkoxy carbonyl, $(C_1$ - $C_{10})$ alkylcarbonyl, $(C_1$ - $C_{10})$

alkylsulfonylamino, aminosulfonyl, or (C₁-C₁₀) alkylsulfonyl,

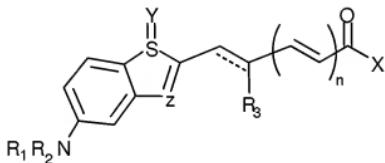
n is equal to 0, 1 or 2;

X is hydroxyl (-OH), -OR, NHR, hydroxamate (-NHOH), NHOR, NROR, NRNHR, or SR, where each R is independently hydrogen, C₁-C₆ alkyl or substituted C₁-C₆ alkyl; and

Y is 0, 1 or 2 oxygen atoms, or NR where R is H, OH, C₁-C₆ alkyl, or substituted C₁-C₆ alkyl; and

Z is a one atom linkage of N, CH, or CR or a two-atom linkage of varying combinations of atoms of CH, CR, O, N, S, SO, SO₂, wherein R is C₁-C₆ alkyl or substituted C₁-C₆ alkyl.

43. (previously presented) A compound of general formula (B2)



(B2)

in which:

R¹ is (C₆ or C₁₀) aryl, (C₆ or C₁₀) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C₆ or C₁₀) heteroaryl, (C₃-C₈) heterocycloalkenyl, (C₅-C₈) cycloalkene ring, (C₅-C₈) cycloalkyl, (C₅-C₈) heterocycloalkyl or a combination thereof to form a linked or fused ring system, the cyclic moiety being optionally substituted with (C₁-C₁₀) alkyl, (C₁-C₁₀) alkenyl, (C₁-C₁₀) alkynyl, (C₁-C₁₀) alkoxy, (C₁-C₁₀) thioalkoxy, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, (C₁-C₁₀) haloalkyl, amino, amido, (C₁-C₁₀) alkylamino, (C₁-C₁₀) alkylcarbonyloxy, (C₁-C₁₀) alkoxycarbonyl, (C₁-C₁₀) alkylcarbonyl, (C₁-C₁₀) alkylthiocarbonyl, (C₁-C₁₀) alkylsulfonylamino, aminosulfonyl, (C₁-C₁₀) alkylsulfinyl, or (C₁-C₁₀) alkylsulfonyl,

R² and R³ are each independently hydrogen, (C₁-C₁₂) alkyl, substituted (C₁-C₁₂) alkyl, or unsaturated (C₂-C₁₂) comprising one or more C=C bond or C≡C bond, (C₆ or C₁₀) aryl or (C₆ or C₁₀) heteroaryl, or a combination thereof to form a linked or fused ring system, or (C₁-C₁₀)

alkoxy, (C₁-C₁₀) thioalkoxy, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, (C₁-C₁₀) haloalkyl, cyano, nitro, amino, amido, (C₁-C₁₀) alkylamino, (C₁-C₁₀) alkylcarbonyloxy, (C₁-C₁₀) alkoxycarbonyl, (C₁-C₁₀) alkylcarbonyl, (C₁-C₁₀) alkylthiocarbonyl, (C₁-C₁₀) alkylsulfonylamino, aminosulfonyl, (C₁-C₁₀) alkylsulfinyl, or (C₁-C₁₀) alkylsulfonyl, in which the saturated or an unsaturated hydrocarbon chain is optionally interrupted by O, S, NR, CO, C(NR), N(R)SO₂, SO₂N(R), N(R)C(O)O, OC(O)N(R), N(R)C(O)N(R), OC(O), C(O)O, OSO₂, SO₂O, or OC(O)O, where R is independently hydrogen, (C₁-C₁₀) alkyl, (C₁-C₁₀) alkenyl, (C₁-C₁₀) alkynyl, (C₁-C₁₀) alkoxy, (C₁-C₁₀) hydroxylalkyl, hydroxyl, (C₁-C₁₀) halolalkyl, where each of the saturated or unsaturated hydrocarbon chains are optionally substituted with (C₁-C₁₀) alkyl, (C₁-C₁₀) alkenyl, (C₁-C₁₀) alkynyl, (C₁-C₁₀) alkoxy, hydroxyl, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, (C₁-C₁₀) haloalkyl, amino, (C₁-C₁₀) alkylcarbonyloxy, (C₁-C₁₀) alkoxycarbonyl, (C₁-C₁₀) alkylcarbonyl, (C₁-C₁₀) alkylsulfonylamino, aminosulfonyl, or (C₁-C₁₀) alkylsulfonyl; or

R² and R³ optionally form a (C₆ or C₁₀) aryl, (C₆ or C₁₀) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C₃-C₈) heterocycloalkenyl, (C₅-C₈) cycloalkene ring, (C₅-C₈) cycloalkyl, (C₅-C₈) heterocycloalkyl linked or fused ring system, optionally containing up to 3 heteroatoms, e.g. oxygen, nitrogen, sulphur or phosphorous; or

R¹ and R² optionally form a (C₆ or C₁₀) aryl, (C₆ or C₁₀) arylalkyl, (C₆ or C₁₀) heteroaryl, (C₃-C₈) heterocycloalkenyl, (C₅-C₈) cycloalkene ring, (C₅-C₈) cycloalkyl, (C₅-C₈) heterocycloalkyl linked or fused ring system, optionally the ring formed is further substituted with a group R¹ as defined above, or the ring formed is fused to a further C₆ aryl group which is optionally substituted with a group R¹ as defined above, or a group R¹R²N, with R¹ and R² as defined above,

n is equal to 0, 1 or 2,

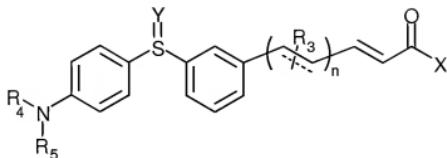
X is hydroxyl (-OH), -OR, NHR, hydroxamate (-NHOH), NHOR, NROR, NRNHR, or SR, where each R is independently hydrogen, C₁-C₆ alkyl or substituted C₁-C₆ alkyl, and

Y is 0, 1 or 2 oxygen atoms, or NR where R is H, OH, OR or C, where R is C₁-C₆ alkyl or substituted C₁-C₆ alkyl,

and Z is a one atom linkage of N, CH or CR, or a two-atom linkage of varying combinations of atoms of CH, CR, O, N, S, SO, SO₂, and in which each R is independently C₁-C₆ alkyl or

substituted C₁-C₆ alkyl.

44. (previously presented) A compound of general formula (C)



(C)

in which:

R³ is hydrogen, (C₁-C₁₂) alkyl, substituted (C₁-C₁₂) alkyl, or unsaturated (C₂-C₁₂) comprising one or more C=C bond or C≡C bond, (C₆ or C₁₀) aryl or (C₆ or C₁₀) heteroaryl, or a combination thereof to form a linked or fused ring system, or (C₁-C₁₀) alkoxy, (C₁-C₁₀) thioalkoxy, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, (C₁-C₁₀) haloalkyl, cyano, nitro, amino, amido, (C₁-C₁₀) alkylamino, (C₁-C₁₀) alkylcarbonyloxy, (C₁-C₁₀) alkoxycarbonyl, (C₁-C₁₀) alkylcarbonyl, (C₁-C₁₀) alkylthiocarbonyl, (C₁-C₁₀) alkylsulfonylamino, aminosulfonyl, (C₁-C₁₀) alkylsulfinyl, or (C₁-C₁₀) alkylsulfonyl, in which the saturated or an unsaturated hydrocarbon chain is optionally interrupted by O, S, NR, CO, C(NR), N(R)SO₂, SO₂N(R), N(R)C(O)O, OC(O)N(R), N(R)C(O)N(R), OC(O), C(O)O, OSO₂, SO₂O, or OC(O)O, where R is independently hydrogen, (C₁-C₁₀) alkyl, (C₁-C₁₀) alkenyl, (C₁-C₁₀) alkynyl, (C₁-C₁₀) alkoxy, (C₁-C₁₀) hydroxylalkyl, hydroxyl, (C₁-C₁₀) halolalkyl, where each of the saturated or unsaturated hydrocarbon chains are optionally substituted with (C₁-C₁₀) alkyl, (C₁-C₁₀) alkenyl, (C₁-C₁₀) alkynyl, (C₁-C₁₀) alkoxy, hydroxyl, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, (C₁-C₁₀) haloalkyl, amino, (C₁-C₁₀) alkylcarbonyloxy, (C₁-C₁₀) alkoxycarbonyl, (C₁-C₁₀) alkylcarbonyl, (C₁-C₁₀) alkylsulfonylamino, aminosulfonyl, or (C₁-C₁₀) alkylsulfonyl;

n is equal to 0, 1 or 2;

X is hydroxyl (-OH), -OR, NHR, hydroxamate (-NHOH), NHOR, NROR, NRNHR, or SR, where each R is independently hydrogen, C₁-C₆ alkyl or substituted C₁-C₆ alkyl;

Y is 0, 1 or 2 oxygen atoms, or NR where R is H, OH, OR or C, where R is C₁-C₆ alkyl

or substituted C₁-C₆ alkyl; and

R⁴ and R⁵ are each independently hydrogen, unsubstituted or substituted C₁-C₁₀ alkyl, an unsaturated hydrocarbon chain of up to ten carbon atoms comprising one or more carbon-carbon double bonds, C₆ or C₁₀ aryl, a 5- to 10-membered heterocyclic group, C₁-C₁₀ alkoxy, C₁-C₁₀ thioalkoxy, hydroxyl, halo, cyano, nitro, amino, amido, (C₁-C₁₀ alkyl)carbonyloxy, (C₁-C₁₀ alkoxy)carbonyl, (C₁-C₁₀ alkyl)carbonyl, (C₁-C₁₀ alkyl)thiocarbonyl, (C₁-C₁₀ alkyl)sulfonylamino, aminosulfonyl, C₁-C₁₀ alkylsulfinyl, C₁-C₁₀ alkylsulfonyl, or a saturated or unsaturated C₃-C₁₂ hydrocarbon chain interrupted by O, S, NR, CO, C(NR), N(R)SO₂, SO₂N(R), N(R)C(O)O, OC(O)N(R), N(R)C(O)N(R), OC(O), C(O)O, OSO₂, SO₂O or OC(O)O₂ where R is as defined above and the saturated or unsaturated hydrocarbon chain is optionally substituted as defined above.

45. (previously presented) A compound as claimed in claim 41, in which R² and R³ are both Hydrogen.

46. (previously presented) A compound as claimed in claim 41, in which R² is methyl (CH₃) and R³ is Hydrogen.

47. (previously presented) A compound as claimed in claim 41, in which R² is Hydrogen and R³ is methyl (CH₃).

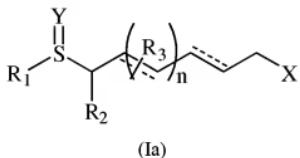
48. (previously presented) A compound as claimed in claim 41, in which R² and R³ are both methyl (CH₃).

49. (previously presented) A compound as claimed in claim 41, in which X is -OH, -OC₂H₅, -OCH₃, or NHOH.

50. (previously presented) A compound as claimed in claim 41, in which Y is represented by one or two oxygen atoms.

51-52. (canceled).

53. (previously presented) A compound of general formula (Ia)



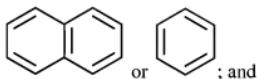
wherein:

R^2 and R^3 are both Hydrogen (H);

Y is two oxygen atoms;

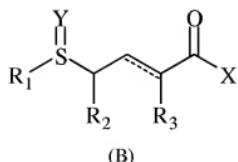
n is 1;

R^1 is



X is -OH, -CH₃, -OC₂H₅ or NHOH.

54. (previously presented) A compound of general formula (B)



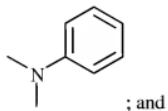
wherein:

R^2 and R^3 are both methyl (CH₃);

Y is zero oxygen atoms;

n is zero;

R₁ is



; and

X is -OCH₃, -OC₂H₅ or -OH.

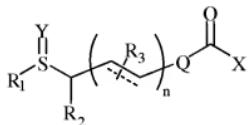
55. (currently amended) A compound which is:

- 6-(4-Dimethylamino-phenylsulfanyl)-hexa-2,4-dienoic acid methyl ester (6d),
- 6-(4-Methoxy-phenylsulfanyl)-hexa-2,4-dienoic acid methyl ester (6e),
- 6-(4-Chloro-phenylsulfanyl)-hexa-2,4-dienoic acid hydroxyamide (7b),
- 6-(4-Dimethylamino-phenylsulfanyl)-hexa-2,4-dienoic acid hydroxyamide (7c),
- 6-Phenylsulfinyl hexa-2,4-dienoic acid methyl ester (8a),**
- 6-(4-Chloro-benzenesulfinyl)-hexa-2,4-dienoic acid methyl ester (8b),
- 6-(4-Methoxy-benzenesulfinyl)-hexa-2,4-dienoic acid methyl ester (8c),
- 6-Benzenesulfinyl-hexa-2,4-dienoic acid (8d),
- 6-(4-Chloro-benzenesulfinyl)-hexa-2,4-dienoic acid hydroxyamide (9a),
- 6-(4-Methoxy-benzenesulfinyl)-hexa-2,4-dienoic acid hydroxyamide (9b),
- 6-Benzenesulfonyl-hexa-2,4-dienoic acid (10a),
- 6-Benzenesulfonyl-hexa-2,4-dienoic acid methyl ester (10b),
- 6-Benzenesulfonyl-hexa-2,4-dienoic acid hydroxyamide (11a),
- 6-(Naphthalen-2-ylsulfanyl)-hexa-2,4-dienoic acid methyl ester (13b),
- 6-(Naphthalen-2-ylsulfanyl)-hexa-2,4-dienoic acid hydroxyamide (14a),
- 4-(4-Dimethylamino-phenylsulfanyl)-2-methyl-pent-2-enoic acid methyl ester (21b),
- 6-(4-Dimethylamino-phenylsulfanyl)-4-methyl-hepta-2,4-dienoic acid ethyl ester (24c),
- 6-(4-Dimethylamino-phenylsulfanyl)-4-methyl-hepta-2,4-dienoic acid hydroxyamide (25c),
- 6-(4-Chloro-phenylsulfanyl)-hexanoic acid methyl ester (28b),
- 7-(4-Chloro-phenylsulfanyl)-heptanoic acid ethyl ester (28c),
- 6-(4-Dimethylamino-phenylsulfanyl)-hexanoic acid methyl ester (28e),

6-(4-((4-Chlorobenzyl)-methylamino)-phenylsulfanyl)-hexanoic acid methyl ester (28f),
6-(4-(4-Chlorobenzenesulfonylamino)-phenylsulfanyl)-hexanoic acid methyl ester
(28g),
6-(4-Bromo-phenylsulfanyl)-hexanoic acid methyl ester (28h),
6-(4'-Chloro-biphenyl-4-ylsulfanyl)-hexanoic acid methyl ester (28i),
6-(4-Chloro-phenylsulfanyl)-hexanoic acid hydroxyamide (29b),
6-(4-Dimethylamino-phenylsulfanyl)-hexanoic acid hydroxamide (29c),
6-(4-(4-Chlorobenzenesulfonylamino)-phenylsulfanyl)-hexanoic acid hydroxamide
(29g),
6-(4'-Chloro-biphenyl-4-ylsulfanyl)-hexanoic acid hydroxamide (29i),
6-(4-Chloro-benzenesulfinyl)-hexanoic acid methyl ester (30b),
7-(4-Chloro-benzenesulfinyl)-heptanoic acid ethyl ester (30c),
6-(4-Dimethylamino-benzenesulfinyl)-hexanoic acid methyl ester (30e),
6-(4-((4-Chlorobenzyl)-methylamino)-benzenesulfinyl)-hexanoic acid methyl ester
(30f),
6-(4'-Chloro-biphenyl-4-ylsulfinyl)-hexanoic acid methyl ester (30i),
6-(4-Chloro-benzenesulfinyl)-hexanoic acid hydroxyamide (31a),
7-(4-Chloro-benzenesulfinyl)-heptanoic acid hydroxyamide (31c),
6-(4-Dimethylamino-benzenesulfinyl)-hexanoic acid hydroxyamide (31e),
6-(4-((4-Chlorobenzyl)-methylamino)-benzenesulfinyl)-hexanoic acid hydroxamide
(31f),
6-(4'-Chloro-biphenyl-4-sulfinyl)-hexanoic acid hydroxyamide (31i),
(2E,4E)-5-(5-Dimethylamino-benzo[b]thiophen-2-yl)-penta-2,4-dienoic acid ethyl ester
(41a),
(2E,4E)-5-(5-Dimethylaminobenzo[b]thiophen-2-yl)-penta-2,4-dienoic acid hydroxamide
(42a),
(E)-3-(3-(4-Dimethylamino-phenylsulfanyl)-phenyl)-acrylic acid ethyl ester (51a.), or
(E)-3-(3-(4-Dimethylamino-phenylsulfanyl)-phenyl)-N-hydroxy-acrylamide (52a).

56. (currently amended) A pharmaceutical composition comprising a compound of claims 41 to 50, and 53 to 55, and optionally a pharmaceutically acceptable adjuvant and/or diluent.

57. (currently amended) A method of inhibiting HDAC activity in an individual suffering from a disease or condition related to aberrant HDAC activity comprising administering to said individual a therapeutically effective amount of a compound of general formula (I):



(1)

in which:

R¹ is (C₆ or C₁₀) aryl, (C₆ or C₁₀) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C₆ or C₁₀) heteroaryl, (C₃-C₈) heterocycloalkenyl, (C₅-C₈) cycloalkene ring, (C₅-C₈) cycloalkyl, (C₅-C₈) heterocycloalkyl or a combination thereof to form a linked or fused ring system, the cyclic moiety being optionally substituted with (C₁-C₁₀) alkyl, (C₁-C₁₀) alkenyl, (C₁-C₁₀) alkynyl, (C₁-C₁₀) alkoxy, (C₁-C₁₀) thioalkoxy, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, (C₁-C₁₀) haloalkyl, amino, amido, (C₁-C₁₀) alkylamino, (C₁-C₁₀) alkylcarbonyloxy, (C₁-C₁₀) alkoxycarbonyl, (C₁-C₁₀) alkylcarbonyl, (C₁-C₁₀) alkylthiocarbonyl, (C₁-C₁₀) alkylsulfonylamin, aminosulfonyl, (C₁-C₁₀) alkylsulfinyl, or (C₁-C₁₀) alkylsulfonyl.

R^2 and R^3 are each independently hydrogen, (C₁-C₁₂) alkyl, unsaturated (C₂-C₁₂) comprising one or more C=C bond or C≡C bond, (C₁-C₁₀) alkoxy, (C₁-C₁₀) thioalkoxy, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, or (C₁-C₁₀) haloalkyl; or

R^2 and R^3 optionally form a (C_6 or C_{10}) aryl, (C_6 or C_{10}) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C_3 - C_8) heterocycloalkenyl, (C_5 - C_8) cycloalkene ring, (C_5 - C_8) cycloalkyl, (C_5 - C_8) heterocycloalkyl linked or fused ring system, optionally containing up to 3 heteroatoms selected from oxygen, nitrogen, sulphur, and phosphorous; or

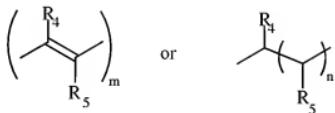
R¹ and R² optionally form a (C₆ or C₁₀) aryl, (C₆ or C₁₀) arylalkyl, (C₆ or C₁₀) heteroaryl, (C₃-C₈) heterocycloalkenyl, (C₅-C₈) cycloalkene ring, (C₅-C₈) cycloalkyl, (C₅-C₈) heterocycloalkyl linked or fused ring system, optionally the ring formed is further substituted with a group R¹ as defined above, or the ring formed is fused to a further C₆ aryl group which is optionally substituted with a group R¹ as defined above, or a group R¹R²N, with R¹ and R² as defined above;

n is equal to 0, 1 or 2;

X is hydroxyl (-OH), -OR, NHR, hydroxamate (-NHOH), NHOR, NROR, NRNHR, or SR, wherein each R is independently hydrogen, C₁-C₆ alkyl or substituted C₁-C₆ alkyl;

Y is 0, 1 or 2 oxygen atoms, or NR where R is H, OH, C₁-C₆ alkyl or substituted C₁-C₆ alkyl;

Q represents



wherein:

m is an integer from 1 to 4;

n is an integer from 1 to 8; and

R⁴ and R⁵ each independently represent hydrogen, or unsubstituted or substituted C₁-C₁₀ alkyl;

or a pharmaceutically acceptable salt thereof.

58-63. (canceled).

64. (previously presented) A compound of claim 43, wherein:

X is NHOH, OH, NROR, or CRROH; and

Z is CR or N.

65. (previously presented) The method of claim 57, wherein:

R¹ is (C₆ or C₁₀) aryl, optionally substituted by (C₁-C₁₀) alkoxy, halo or (C₁-C₁₀) alkylamino;

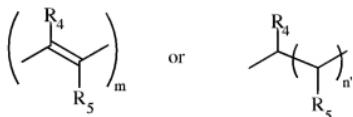
R² and R³ are each independently hydrogen or methyl, or R² and R³ optionally form a C₆ aryl;

n is equal to 0, 1 or 2;

X is hydroxyl (-OH), -OR, NHR, hydroxamate (-NHOH), NHOR, NROR, NRNH₂, or SR, wherein each R is independently selected from hydrogen, C₁-C₆ alkyl or substituted C₁-C₆ alkyl;

Y is O, 1, or 2 oxygen atoms;

Q represents



wherein:

m is an integer from 1 to 4;

n' is an integer from 1 to 8; and

R⁴ and R⁵ each independently represent hydrogen or methyl.

66. (previously presented) The method of claim 57, wherein said compound of general formula (I) is:

6-Phenylsulfanyl-hexa-2,4-dienoic acid (6a),

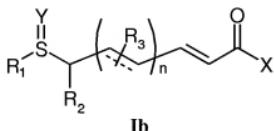
6-(4-Chloro-phenylsulfanyl)-hexa-2,4-dienoic acid methyl ester (6b), or

6-Phenylsulfanyl-hexa-2,4-dienoic acid methyl ester (6c).

67. (previously presented) A method of stimulating hematopoietic cells *ex vivo*, comprising administering an effective amount of a compound of general formula (I).

68-69. (canceled).

70. (previously presented) A compound of general formula (Ib)



wherein:

R¹ is (C₆ or C₁₀) aryl, (C₆ or C₁₀) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C₆ or C₁₀) heteroaryl, (C₃-C₈) heterocycloalkenyl, (C₅-C₈) cycloalkene ring, (C₅-C₈) cycloalkyl, (C₅-C₈) heterocycloalkyl or a combination thereof to form a linked or fused ring system, the cyclic moiety being optionally substituted with (C₁-C₁₀) alkyl, (C₁-C₁₀) alkenyl, (C₁-C₁₀) alkynyl, (C₁-C₁₀) alkoxy, (C₁-C₁₀) thioalkoxy, hydroxyl, (C₁-C₁₀) hydroxylalkyl, halo, (C₁-C₁₀) haloalkyl, amino, amido, (C₁-C₁₀) alkylamino, (C₁-C₁₀) alkylcarbonyloxy, (C₁-C₁₀) alkoxy carbonyl, (C₁-C₁₀) alkylcarbonyl, (C₁-C₁₀) alkylthiocarbonyl, (C₁-C₁₀) alkylsulfonyl amino, aminosulfonyl, (C₁-C₁₀) alkylsulfinyl, or (C₁-C₁₀) alkylsulfonyl;

R² and R³ are each independently hydrogen or methyl, or R² and R³ optionally form a (C₆ or C₁₀) aryl;

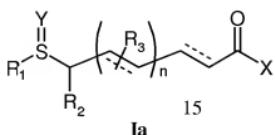
n is 0, 1 or 2;

X is hydroxamate (-NHOH); and

Y is 0, 1 or 2 oxygen atoms;

or a pharmaceutically acceptable salt thereof.

71. (previously presented) The method of claim 57, wherein the compound of formula (I) has a structure of general formula (Ia):



wherein:

R^1 is (C_6 or C_{10}) aryl, (C_6 or C_{10}) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C_6 or C_{10}) heteroaryl, (C_3 - C_8) heterocycloalkenyl, (C_5 - C_8) cycloalkene ring, (C_5 - C_8) cycloalkyl, (C_5 - C_8) heterocycloalkyl or a combination thereof to form a linked or fused ring system, the cyclic moiety being optionally substituted with (C_1 - C_{10}) alkyl, (C_1 - C_{10}) alkenyl, (C_1 - C_{10}) alkynyl, (C_1 - C_{10}) alkoxy, (C_1 - C_{10}) thioalkoxy, hydroxyl, (C_1 - C_{10}) hydroxylalkyl, halo, (C_1 - C_{10}) haloalkyl, amino, amido, (C_1 - C_{10}) alkylamino, (C_1 - C_{10}) alkylcarbonyloxy, (C_1 - C_{10}) alkoxy carbonyl, (C_1 - C_{10}) alkylcarbonyl, (C_1 - C_{10}) alkylthiocarbonyl, (C_1 - C_{10}) alkylsulfonylamino, aminosulfonyl, (C_1 - C_{10}) alkylsulfinyl, or (C_1 - C_{10}) alkylsulfonyl,

R^2 and R^3 are each independently hydrogen, (C_1 - C_{12}) alkyl, unsaturated (C_2 - C_{12}) comprising one or more $C\equiv C$ bond or $C\equiv C$ bond, (C_1 - C_{10}) alkoxy, (C_1 - C_{10}) thioalkoxy, hydroxyl, (C_1 - C_{10}) hydroxylalkyl, halo, or (C_1 - C_{10}) haloalkyl; or

R^2 and R^3 optionally form a (C_6 or C_{10}) aryl, (C_6 or C_{10}) arylalkyl, a 6- or 10-membered ring system having one or more heteroatoms in the ring, (C_3 - C_8) heterocycloalkenyl, (C_5 - C_8) cycloalkene ring, (C_5 - C_8) cycloalkyl, (C_5 - C_8) heterocycloalkyl linked or fused ring system, optionally containing up to 3 heteroatoms, e.g. oxygen, nitrogen, sulphur or phosphorous; or

R^1 and R^2 optionally form a (C_6 or C_{10}) aryl, (C_6 or C_{10}) arylalkyl, (C_6 or C_{10}) heteroaryl, (C_3 - C_8) heterocycloalkenyl, (C_5 - C_8) cycloalkene ring, (C_5 - C_8) cycloalkyl, (C_5 - C_8) heterocycloalkyl linked or fused ring system, optionally the ring formed is further substituted with a group R^1 as defined above, or the ring formed is fused to a further C_6 aryl group which is optionally substituted with a group R^1 as defined above, or a group R^1R^2N , with R^1 and R^2 as defined above;

n is 0, 1 or 2;

X is hydroxyl (-OH), -OR, NHR, hydroxamate (-NHOH), NHOR, NROR, NRNHR, or SR, wherein each R is independently hydrogen, C_1 - C_6 alkyl or substituted C_1 - C_6 alkyl; and

Y is 0, 1 or 2 oxygen atoms, or NR where R is H, OH, C_1 - C_6 alkyl, or substituted C_1 - C_6 alkyl;

or a pharmaceutically acceptable salt thereof.